

REMARKS

The Office Action dated October 5, 2005 has been received and carefully noted. The following remarks are submitted as a full and complete response to the Office Action.

Applicants gratefully acknowledge the indication in the Office Action that claims 16-20 and 26-35 are allowed and that claims 3-6, 9-12, 15 and 22 would be allowable if rewritten into independent form. Applicants respectfully submit that claims 3-6, 9-12, 15 and 22 are allowable in their present form. Claims 1, 2, 7, 8, 13, 14, 21 and 23-25 are respectfully submitted for consideration.

The Office Action rejected claims 1-2, 7-8, 13-14, 21 and 23-25 under 35 U.S.C. §103(a) as being obvious over US Patent No. 5,917,821 to Gobuyan et al. (Gobuyan), in view of US Patent No. 6,920,562 to Kerr et al. (Kerr). The Office Action asserted that Gobuyan disclosed all of the features of these claims except the feature of processing the plurality of fields in parallel. The Office Action alleges that Kerr discloses this feature. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims.

Claim 1, upon which claims 2-6 depend, recites a method for a programmable micro-controller. The method comprises loading an instruction word within the micro-controller, the instruction word having a plurality of instruction fields. The method

further includes processing the plurality of instruction fields in parallel, each instruction field related to a specific operation for parsing a packet or encapsulating data to form a packet.

Claim 7, upon which claims 8-15 depend, recites a programmable micro-controller. The programmable micro-controller comprises an embedded memory to store one or more instruction words, each instruction word including a plurality of instruction fields. The programmable micro-controller further includes one or more processing engines, each processing engine to process the plurality of instruction fields in parallel for each instruction word, each instruction field related to the specific operation for parsing a packet or encapsulating data to form a packet.

Claim 21, from which claims 22-25 depend, recites a computer program embodied on computer-readable medium for controlling a micro-controller. The instruction for the micro-controller includes a plurality of operation fields to be processed in parallel by the micro-controller, each operation field related to a specific function for parsing a packet or encapsulating data to form a packet.

The present invention provides low processing latency for parsing a packet or encapsulating data to form a packet. In particular, by loading instructions within the micro-controller, the micro-controller avoids accessing external memory to load instructions, thereby reducing processing latency. The programmable micro controller of the present invention uses a micro-instruction set specific for parsing and encapsulating. By using a micro-instruction set specific for parsing and encapsulating, the

programmable micro-controller can perform fast parsing and encapsulating functions, whereby allowing efficient transfer of control for each routine.

Gobuyan is directed to an arrangement for parsing packets in a packet-based data transmission network. In this arrangement, the packets include packet headers divided into fields having values representing information pertaining to the packet. A look up engine 3 (alleged microcontroller) retrieves stored information appropriate to a received field value. See Figure 3. The microcode (alleged instruction word) of the LEC 3 is divided into four main fields (see column 12, lines 11-14). The Office Action admits that Gobuyan fails to disclose the feature of processing the plurality of instruction fields in parallel. As discussed above, the Office Action alleges that Kerr makes up for this deficiency.

Kerr is directed to an encryption mechanism that couples hardware data encryption functions with software-based protocol decode processing. Kerr discloses that each instruction includes two op codes and each op code executes concurrently on its respective unit and in parallel with the other (see column 8 lines 20-24 of Kerr).

Applicants respectfully submit that the cited references cannot be properly combined to form the basis of a rejection of any of the above claims, because there is no motivation to combine the cited references as suggested in the Office Action.

To establish a *prima facie* case of obviousness there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings.

There also must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not in the applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Gobuyan discloses a micro code with four fields. The four fields are a series of codes that cannot be processed in parallel because of the interdependence of the op codes. See column 12 lines 25-35 of Gobuyan. Thus, Gobuyan cannot be properly combined with Kerr which, as discussed above, discloses parallel processing of the op codes. In order to combine the references the interdependence of the op codes would have to be eliminated from Gobuyan in order to process to op codes in parallel as disclosed in Kerr. The removal of the op codes interdependence would render the disclosure in Gobuyan unsuitable for its intended purpose.

Thus, there is no proper motivation to combine the cited references to form the basis for an obviousness rejection. Accordingly, the Office Action fails to establish a prima facie case of obviousness for rejecting the above claims.

Based at least on the above, applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features of claims 1, 2, 7, 8, 13, 14, 21 and 23-25. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) of claims 1, 2, 7, 8, 13, 14, 21 and 23-25, is respectfully requested.

The Office Action objected to claims 3-6, 9-12, 15 and 22 as being dependent from a rejected base claim, but would be allowable if rewritten into independent form.

As discussed above, Applicants respectfully submit because these claims depend from claims 1, 7 and 21 respectively, these claims are allowable in their present form at least for the same reasons as claims 1, 7, and 21. Accordingly, withdrawal of the objection of claims 3-6, 9-12, 15 and 22 is respectfully requested.

Applicants respectfully submit that each of the pending claims recite subject matter that is neither disclosed nor suggested in any of the cited references. Accordingly, Applicants respectfully request that each of the pending claims be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D.E. Brown', is written over a horizontal line.

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